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THE ROLE OF COMMUNITY COLLEGE ADMINISTRATION IN RELATION TO INSTITUTIONAL RESEARCH, REPORT OF THE DRIVE-IN CONFERENCE (WAYNE STATE UNIVERSITY, MAY 5, 1967).

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INSTITUTIONAL RESEARCH IN THE JUNIOR COLLEGE WAS CONSIDERED IN THREE ASPECTS. FIRST, A DESCRIPTION OF THE EDUCATIONAL DEVELOPMENT PROGRAM AT MICHIGAN STATE UNIVERSITY LED TO 10 PRINCIPLES OF ADMINISTRATION AND ORGANIZATION--(1) A SMALL DIRECTORATE, (2) AN OVERVIEW OF ACADEMIC PROBLEMS, (3) ACCESS TO KEY FACULTY COMMITTEES, (4) COORDINATION OF EXISTING EXPERTISE, (5) PROVISION OF DISCRETIONARY FUNDS, (6) A GRANT AND PROJECT PROCEDURE, (7) FACULTY PARTICIPATION, (8) BUILT-IN EVALUATION, (9) REGULAR SUPPORT FOR SUCCESSFUL PROJECTS, AND (10) CONTINUING LIAISON. SECOND, ARTICULATION OF THE INSTITUTIONAL RESEARCH PROGRAM WITH THE ENTIRE INSTITUTIONAL OPERATION WAS CONSIDERED IN TERMS OF THE SCOPE OF THE RESEARCH FUNCTION. THIRD, THE USE OF THE COLLEGE STUDENT QUESTIONNAIRES AND THE COLLEGE AND UNIVERSITY ENVIRONMENTAL SCALES WAS DESCRIBED. EMPHASIS IN THE CONFERENCE WAS PLACED ON THE ORGANIZATION OF INSTITUTIONAL RESEARCH WITH THE PURPOSE OF ASSISTING IN ATTAINMENT OF EDUCATIONAL GOALS OF THE STUDENT AND THE INSTITUTION. (WO)

THE ROLE OF COMMUNITY COLLEGE ADMINISTRATION IN RELATION TO INSTITUTIONAL RESEARCH

The subject matter of these Drive-In Conferences is selected after inquiry of our community college presidents and, through them, of their respective faculty members. All indicate that high on the priority list is the topic of institutional evaluation as applied to administration.

In corporations, businesses, and governmental organizations across America, institutional evaluation has progressed to a highly specialized science. In the area of higher education, we have been somewhat behind the times in taking a hard and profitable look at the internal structures and operations within our own bailiwicks. But we have also been making impressive strides.

In our own community college area we have access to several organizations designed in part for developing internal research at the community college and multiversity levels. Outstanding among these are the Educational Testing Service, the Center for the Study of Higher Education, University of Michigan, and the Educational Development Program, Michigan State University. Each organization is ably represented in this conference.

The following reports are indicative of the services, techniques, and data of which we may avail ourselves and apply to our own administrative needs. Further inquiry is welcomed.

Sigurd Rislov

SIGURD RISLOV
Conference Director

A Catalytic Agent for Innovation in Higher Education

John E. Dietrich and F. Craig Johnson*

Late in 1965, John Gardner warned that "it will be possible for colleges and universities to be busy and populous and yet fail in their essential jobs — which is to say that they could be busy and populous frauds."[1] To avoid this disasterous possibility, he challenges university educators to "restore the status of teaching," "undertake a thorough reform of the undergraduate curriculum," and "improve our procedures for institutional planning." It is within the context of just such challenges that Michigan State University has developed a catalytic agent for change, the Educational Development Program (EDP). This program is helping in the forward planning of the institution and places particular emphasis on the improvement of undergraduate education. While programs of this type are certain to vary in form and scope from one institution to another, the basic concepts should be applicable to institutions of varying size and nature.[2]

The Need for Innovation in Higher Education

Again and again in the last few years, the need for innovation has been expressed, almost always in the most generic terms, such as limited resources, increased enrollments, shortage of faculty, the explosion of knowledge and the increasing demands of society for research. These forces are having a particularly direct and fre-

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[1]John W. Gardner, "Agenda for the Colleges and Universities - Higher Education in an Innovative Society," *Journal of Higher Education*, Vol. XXXVI, No. 7, October, 1965, p. 359.

[2]One author is a member of the board of trustees of a small private liberal arts college (600 students and 200 courses) which seems to be a microcosm of Michigan State (31,000 undergraduates and 2,250 undergraduate courses).

quently deleterious effect upon our undergraduate programs. Let us look at a few examples of the specific problems and questions which lie beneath the general descriptions.

Limited Resources—Most new dollars are being used to cover the costs of new students. Thus the per capita dollars for the undergraduate are not rising significantly.[3] Other new dollars are being employed to strengthen the costly graduate and research programs needed to meet the increased demands of society. As a result, the undergraduate program must be improved with approximately the same dollars in the face of a more expensive economy. Where should any new dollars go? To increase present faculty salaries? To hire more faculty? To hire more teaching assistants? To hire technical supporting personnel? To add new programs? To experiment with new technologies? To finance more efficient teaching models?

Increased Enrollments—New enrollments coupled with the limited resources lead to another complex of problems. To suggest only a single aspect, the beginning "service" courses (taking care of other people's kids—the nonmajors) are becoming educational complexes ranging from hundreds to thousands of students in a single term. Recognizing that most faculties are striving to keep up with their disciplines and are not much interested in "other people's kids," what can we do? Build more large lecture halls? Employ television? Develop independent study materials. Equip programmed laboratories? Buy teaching machines? Computers?

Faculty Shortages—While a shortage of faculty may be only a five to ten year interim problem, it is upon us. At present, there is a consistent move to turn more and more of undergraduate education, particularly the highly critical first two years, over to less qualified personnel. Some institutions admit to teaching 30 per cent or more of their undergraduate program with teaching assistants. This pattern is with us to stay. How can we improve our undergraduate teaching? Develop new patterns of orientation for new teachers? Give them supervision? In-service training? All of which requires senior faculty time. Or should we eliminate or reduce the number of small-group instructional models? Develop "peer group" teaching? Team teaching? Build large course complexes run by managerial personnel?

Explosion of Knowledge—The growth of knowledge is so tremendous that we can no longer teach coverage. The questions are clear. What shall we teach? and How shall we teach it? Or perhaps better stated, What should be learned? and How shall the student learn it? How shall we organize knowledge? How can we determine students' real needs? How can knowledge be made relevant to the student? Should we reorganize the curriculum? Reorganize course content? Experiment with new teaching methods? Develop use of new learning theories and applications?—All of which will compete for time and dollars.

New Societal Demands—Intensified new research demands coupled with new national and international responsibilities have thrust imposing new requirements on our already overextended faculties and facilities. Indeed, Jacques Barzun believes that "yielding to the claims of society will fragment and ultimately destroy an institution." While we disagree, we must admit that each new demand from society does place a greater stress on undergraduate education. How can we fulfill our traditional responsibility for educating? How can we reverse or retard the "flight from teaching?" How can we evaluate and reward teaching? How can we retrain our tenured faculties? And so on. These sample problems and questions should illustrate the interlocking nature of the difficulties with which our delicately-balanced, inordinately-conservative, tradition-bound institutions of higher education must cope.

Developing the Climate for Innovation

Machiavelli once said, "It must be considered that there is nothing more difficult to carry out nor more doubtful of success nor more dangerous to handle than to initiate a new order of things, for the reformer has enemies in all of those who profit by the old order and only lukewarm defenders in all of those who would profit by the new." While many of Machiavelli's methods for solving problems were despicable, we must grant him his analysis. Since an educational institution is conservative and bound by decades of and not centuries of tradition, and is committed at least in part to the guild system of master and apprentice, a general climate favorable to change must be established if a catalytic agent is to have a chance to work. Such a climate depends upon developing an institutional commitment to improvement. As President John Hannah of Michigan State has put it, "We see old models, old attitudes, old methods, old values being challenged and changed in society all around us. Can we expect the university, itself a social instrument, to escape unchallenged and unchanged?"[4] We cannot.

Administrative Commitment to Innovation—Far too much educational administration involves reacting from crisis to crisis in an attempt to keep the educational machine operating without major overhaul. There must be administrative commitment to finding better ways to solve the growing problems. This may require an uprooting of old patterns of thought and a new willingness to consider new proposals and new methods. A commitment to self improvement on the part of a university administration must be communicated to and be supported by governing boards on the one hand and deans and department chairmen on the other.

Talk is not enough. The university must commit some of its own financial resources to innovation. Experimentation and development cost money. More important, they take faculty time. Faculty members must be released from their day to day problems so that they can work in depth on stimulating new projects. The necessary technical support must also be provided and, above all, faculty members involved in significant innovation must be given visibility and professional recognition for their contributions to the well-being of the institute.

Faculty Commitment to Innovation—Faculty commitment to innovation must be developed. Academic planning and educational development in its truest sense is the province and major responsibility of the faculty. Progress in curricular and instructional change is almost totally dependent on university faculty devotion to and concern for academic improvement. In the faculty of almost every department there are prestiged senior members as well as young people who believe improvement of

[3] At Michigan State the numbers of dollars and students have increased tremendously, but the dollar per student has actually decreased slightly in the last five years.

[4] John A. Hannah, "Developing a Tradition of Innovation," An address presented at the National Conference on Curricular and Instructional Innovation, Mimeographed, November, 1966, p. 3.

present procedures and methods is mandatory.[5] Any department chairman worth his salt can readily identify this dynamic nucleus. When such nuclei are charged to examine critical problems and propose new solutions, it can be predicted that the commitment to improvement will spread throughout the departments and the university.

Student Commitment to Innovation — Study after study indicates that thinking students have serious questions about the way our universities are run. Students should be challenged to come forward with positive proposals. Channels must be provided, particularly at the departmental and college level, to evoke provocative thought concerning the relevance and effectiveness of department and college programs, and how they can be improved within the framework of realistic alternatives.

A climate favorable to innovation can be developed. It may take some patience and some time, but the administration, the faculty, and the students do have the same concern; namely, the improvement of the institution and the quality of the education it offers. Catalytic agents, be they carefully evolved statements of policy, blue-ribbon faculty committees, or formally structured agencies, can address the real problems and help to develop a favorable climate. An example of a formally structured agency — the Educational Development Program of Michigan State University — is described in some detail below.

THE EDUCATIONAL DEVELOPMENT PROGRAM

Scope —

In April of 1964, the Educational Development Program (EDP in local parlance) was formally established with support from the Ford Foundation and matching funds from the university. The program has been primarily restricted to undergraduate curricular, instructional and resource development.[6] This decision was and is in line with the national concern for the survival of undergraduate programs. What are the characteristics of undergraduate education at Michigan State? A study revealed the following:

In the fall term, 1963, 70 per cent of the on-campus undergraduate student credit hours were produced in the four departments of the University College, the basic teacher training program in the College of Education, and 11 departments. The 11 departments listed in order of student credit hour production were mathematics, psychology, foreign languages, history, English, chemistry, economics, sociology, accounting, political science and philosophy. Assuming 70 teaching departments, 70 per cent of all undergraduate student credit hours were produced in 15 per cent of the departments. In the fall term, 1963, 40 per cent of the undergraduate student credit hours were produced in 50 courses. Assuming 900 undergraduate courses, 40 per cent of the student credit hours were produced in roughly five per cent of the courses.

In other words, a major segment of undergraduate education was localized. Throughout its brief history, EDP has considered and where possible provided support for departments and courses not falling in the target area, but the heartland of the problem was clearly defined.

Objectives

A statement of Educational Development Program objectives was made shortly after its inception. Today — three years later — the objectives remain intact: The Educational Development Program will be devoted to the development and implementation of a set of educational principles and procedures at Michigan State University which will be developed and approved by the general faculty and which will preserve and improve undergraduate education.

The purposes of the Educational Development Program are (1) to identify major problems in the areas of curriculum, the learning-teaching process and the utilization of faculty, financial and physical resources; (2) to stimulate and conduct research which will suggest solutions to identifiable problems; (3) to undertake projects and studies which give promise of improving both the quality and the efficiency of the undergraduate program; (4) to support and provide service to groups interested in experimentation with new procedures and methods in learning and teaching; (5) to facilitate implementation of faculty and administration approved solutions to problems; and (6) to identify and communicate progress in research, experimentation and implementation.

Organization

Since the EDP function is to coordinate, facilitate, communicate and stimulate educational development, there was little reason to create an extensive organization. Therefore, EDP has not duplicated any organization, structure or capability already present in the university. It has conserved its modest resources for curricular, instructional and resource development projects. The EDP office consists of a director, an assistant director, a one-half time computer programmer and two secretaries. Beyond this small core staff, a number of experts from the regular university faculty are supported on an occasional, part-time, released-time basis to provide necessary guidance and help in the implementation of faculty designed projects. While not a direct part of the organization, EDP depends on two allied agencies for help in the development and servicing of its projects. The Office of Institutional Research, which conducts continuing studies on the internal operations of Michigan State, provides extensive counsel and support in data collection. A new agency, the Institutional Development Service, serves as an example of a university reorganization proposed by EDP. It has three divisions: a Learning Service, an Instructional Media Center, and an Evaluation Service.

The Learning Service collects and applies knowledge about the learning process and instructional procedures. It serves EDP projects involving faculty members interested in defining course objectives, specifying required behaviors, exploring new teaching techniques or relating test results to teaching practices. The Instructional Media Center is responsible for the coordination and development of instructional applications of audiovisual media including closed circuit television and the improvement through research and development of programs and

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[5] A recent study of the innovators at Michigan State indicates that a large proportion of innovative projects comes from outstanding senior members of the faculty who do not feel threatened by change. Frequently the young people feel they must concentrate on "playing the game" at least until they have been tenured and have reached the professorial rank.

[6] In the fall of 1964, the total on-campus enrollment of Michigan State was 31,459 (in 1966 it is 38,107). Of these enrollments, 25,963 were undergraduates (1966 - 30,753 undergraduates) and 5,496 were graduates (1966 - 7,354 graduates). This preponderance of undergraduates continuing into 1966 and for the foreseeable future reinforced the decision.

materials designed for instructional purposes. The Evaluation Service cooperates with teaching departments in the evaluation of student performance and the improvement of common term-end examinations.

The Project Base

The EDP functions on a project base in much the same manner as other funding agencies. Proposals are submitted by faculty members, faculty groups, faculty committees, departments, colleges, and the administration. All projects must have the approval of the appropriate department chairman and college dean. Project proposals are kept simple. If questions arise, suitable faculty experts discuss the proposal with the submitting group. Other faculty experts screen the proposal and make recommendations concerning its support. Typically a well-thought-out proposal can be processed from initial discussion to granting in a period of less than two weeks.

Four general criteria have been established against which all projects are measured. These are: (1) The number of students affected. In general, EDP is concerned with those courses and departments which have large student enrollments. (2) Evidence of an experimental approach to curriculum or instruction. Proposals which merely amplify traditional procedures are referred to the departments and colleges for support. (3) Potential generalization to other academic areas. Projects which are so specific or narrow as to have little applicability to other parts of the university are generally refused. (4) The possibility of evaluation. Procedures for evaluation are built into all projects.

The EDP supports projects through the experimental phase. Upon the successful completion of a project, EDP recommends that the university funds necessary to carry on the innovation be placed in the appropriate department or college budget.

Levels and Areas of Operation

The EDP works at the levels of university policy college and departmental operation, and individual student learning. Simultaneously, it works with curriculum, instruction and resources at each level. Seventy-five projects have been conducted within this framework and are distributed as shown below.

DISTRIBUTION OF SEVENTY-FIVE EDP PROJECTS BY LEVEL AND AREA (1966-67)

LEVELS	DEVELOPMENT AREA		
	Curriculum	Instruction	Resources
University	8	8	6
Department & College	6	15	6
Student	9	8	9

The projects range from participation in the development of the new cluster colleges to total revision of the university curricular guidelines, from evaluation of college organization and curriculums to depth studies of individual departments,[7] from development of new multimedia, structured, independent learning-and-teaching environments to the redirection of direct-instructional, closed-circuit television, from reorganization of the procedures for credit examination to improvement of examinations in more than 30 large courses.[8]

Initial Assessment of the EDP

Recognizing the number of areas and levels in which EDP has worked, it is difficult to assess with any degree of certainty the amount of change directly attributable to the program. Without question some of its accomplishments must be attributed to the "institutional environment" which it has helped to develop and within which it works.

Judging success—At least four criteria may be used for judging the program. The first criterion is the frequency and degree of participation in the major educational movements within the university. It can be demonstrated that EDP has provided service and support in connection with most of the recent changes occurring within the institution. A second criterion is the degree to which innovative ideas have moved from department to department. Numerous instances can be cited to show that successful developments in one department have been transferred where appropriate to other departments. A third criterion is the positive results accruing from intensive evaluation of individual projects supported by the program. These evaluations of both learning and student attitude clearly indicate success in a number of areas.[9] A fourth criterion might be called the "multplier effect." In the three years of formal operation, the number of project requests have quintupled and have given evidence of increasing at an even greater rate. Measured against these kinds of criteria, the EDP can be considered a success.

Judging failure—While the success of the EDP appears to be significant, it is also important to recognize that the program has had its failures. These are failures by omission and failures of commission.

There are significant failures by omission. Some departments in the university have not sought the help or support of the program. Subjective judgment of this failure leads to the conclusion that the willingness to consider innovation is related to the felt need to solve problems. Many faculty members apparently feel no need to consider new or improved methods if traditional patterns seem adequate. If the number of faculty and staff is adequate, if the technical resources are sufficient, if the class section size is reasonably small, and if the vocational and professional accrediting obligations are met, there is little motivation to scrutinize present practices with an eye to improvement.

There have also been failures of commission. Somewhere between six to eight per cent of the 75 EDP projects have been failures. Several of these failures occurred in the initial stages of the program and probably resulted from a lack of efficient and organized screening and evaluation of the proposed projects. Others represented poor judgment on the part of the project developers and the EDP directorate, and still others failed because

[7]The rationale and method for departmental study is reported by Paul L. Dressel and John E. Dietrich, "Departmental Review and Self-Study," *Journal of Higher Education*, Vol. XXXVIII, No. 1, January, 1967, p. 25-37.

[8]A report which gives an abstract of each project may be obtained from the Educational Development Program, Administration Building, Michigan State University, East Lansing, Michigan 48823.

[9]Reports of specific evaluation studies in such areas as Closed Circuit Television, Structured Learning and Teaching Environments (SLATE laboratories), or the Co-Curricular Program, may be obtained from the Educational Development Program, Administration Building, Michigan State University, East Lansing, Michigan 48823.

of inadequate faculty commitment. However, any innovative, experiment-oriented agency must have not only "the right to fail," but also the willingness to withdraw failing experiments quickly.

Dangers of a Catalytic Agent

It is easy for any agency responsible for innovation to become embroiled in "innovation for innovation's sake" or to introduce change in inappropriate ways. As industry has illustrated time and again, new ideas, products, and methods can be undertested and oversold. If faculty advisers and research experts are used on all projects, it is easier to avoid this pitfall. Careful screening, constant liaison, and intensive evaluation help to bring objectivity rather than subjectivity, logic rather than persuasion into the area of innovation.

POSSIBLE APPLICATIONS TO OTHER INSTITUTIONS

It would be gratuitous to suggest that Michigan State University's EDP could or should be transplanted directly in all of its aspects to any other institution. Each college and university has its own special characteristics and style. On the other hand, EDP has certain unique characteristics which we believe are basic to its success. These characteristics can be developed in any institution regardless of size. Our charge to any administrator considering the development of a structured catalytic agent would be as follows:

1. ***Establish a small directorate.*** An educational development program exists to stimulate, facilitate and communicate. There is no need for it to become an empire. A small directorate of one or two people will be sufficient to coordinate the largest program.

2. ***Provide an overview of academic problems.*** The best overview is found in central academic administration. Sooner or later almost all problems land on the desk of the Provost or Dean of Faculties. The director of the program should have regular contact with the chief academic officer.

3. ***Give access to key faculty committees.*** Many of the problems the program will be asked to help solve will arise in faculty policy and curriculum committees. Not only must the director understand the faculty point of view, but perhaps more importantly, the faculty must have confidence that the director understands their point of view. Furthermore, these groups will frequently be part of the channel through which solutions must flow.

4. ***Coordinate existing expertise.*** Often the testing, media and learning experts and even the institutional research experts on the campus are working unilaterally to develop their own facilities. In some instances they may be consciously or unconsciously competing with or at least duplicating each other. They may even be aware of the institutional problems which require their special skill. Coordination of these experts can provide solutions to real university problems. If additional expertise is necessary, it should be placed in these groups rather than expanding the directorate.

5. ***Provide discretionary funds.*** Many times a small amount of money can help solve very large and real problems if the money can be committed quickly. Other times, large and costly projects can be given "seed" money until external support can be found. A principal obstacle to innovation is the shortage of faculty time. By the use of released time, faculty members can be freed to work intensively on new ideas. Further, discretionary funds can be used to encourage action-oriented research on immediate problems. Thus discretionary funds make possible the mounting of immediate faculty action.

6. ***Build a grant procedure within the university.*** A project base gives the chance to select the activities which most need support. A simple proposal, review, approval, monitoring and reporting function should be established. Faculty members should spend only a minimum time on this procedure and devote a maximum effort to the project itself.

7. ***Encourage faculty to submit proposals.*** Most problems can be solved only by the faculty most directly concerned. The small directorate neither can nor should take an active part in projects.

8. ***Provide continuing liaison with projects.*** Projects should not be funded and forgotten. Continuous liaison should be supplied from inception to completion. In some instances when departments or colleges have several on-going projects, faculty members may be appointed to serve this liaison function.

9. ***Build in evaluation.*** Experiments tend to become perpetuated in the system — sometimes regardless of worth. Failing experiments must be eliminated. Evaluation should be a part of each project. Often the faculty involved is best able to do the evaluation while at other times evaluation by an external agency may be desirable.

10. ***Establish regular university support for successful projects.*** All projects should be reviewed. Those judged to be successful should be continued in the regular university operation and supported from regular university funds.

Regardless of whether the methods used by Michigan State are applicable to any other institution, the problems are here, the dilemmas exist, the questions remain unanswered. John Gardner has expressed it well in the concluding note to his "Agenda for Colleges and Universities:"

> I do not believe that the colleges and universities will go under because they are carrying heavy burdens. If they deteriorate, it will be because they lacked the morale, the internal coherence, and the adaptiveness to meet the requirements of the future; it will be because in the moment of their greatest success they could not pull themselves together to face new challenges.

Articulating Institutional Research

James L. Miller, Jr.

We are living in a time of revolution. Yesterday's *New York Times* carried feature stories about the overthrow of the Russian Czar just 50 years ago. It seems incredible that it was so short a time ago — less than a lifetime. Revolution came violently to Russia, and in the years since, revolution has come violently to a long list of nations. Some have suffered repeated revolutions, complete with destruction, pestilence, and often with an aftermath of broken homes and tyrannical suppression of those who dared to remind their countrymen of the visions of progress which first kindled the revolutions. Throughout the world man is struggling toward his dream of a better world, and his struggles all too often lead only to disillusionment.

It is paradoxical that in this age of revolution it is in the United States that one finds the most sweeping revolutions of all. No place on the earth has been transformed more completely, no people's way of life has been changed more basically, than in the United States. The United States has witnessed not one revolution, but a whole series of them and many of them have gone on simultaneously. They go unrecognized for the revolutions they are, because they are accompanied by little or no violence. I believe that this is attributable to the fact that the basic cause of revolutions in the modern world is the rising expectations of the general population, and the United States has found ways in which to meet those rising expectations. As a result, we in the United States have enjoyed revolution without the "r". *Evolution* is less dramatic on the surface, but in our case, at least, we have demonstrated time and again that the changes which it can bring are fundamental.

The Multiversity and the Community College

The most important single instrument of evolutionary revolution in the modern world is education. In contemporary America two of the most dramatic manifestations of revolutionary education are the multiversity and the community junior college. This conference brings together representatives of both to discuss the extent to which they share a common cause and the ways in which they can better articulate their efforts. That such a meeting should take place, that it should take place annually, and that its occurrence should create no surprise is the most eloquent testimony possible to the American acceptance of evolutionary change and of simultaneous multiple revolutions. Indeed, it provides evidence of the further fact that many of America's revolutions are pragmatically interlocked and mutually supportive. I think we Americans fail completely to grasp the broad significance of such an approach to meeting the crisis of rising expectations.

The revolution to which the multiversity is the key is the emergence of knowledge as the basic element for the continued development and good health of the post-industrial society into which we are fast moving. The revolution to which the community junior college is the key is the mass utilization of knowledge — for occupational purposes and for personal ones. The multiversity, through research, opens the doors to the future; the community junior college, through universal higher education, leads the American population into that future. The process, and the results are the process, are the envy of the world.

Center for the Study of Higher Education

I trust that I have painted with sufficiently broad strokes to suggest that I think there is an import to this conference which far exceeds its specific purpose and content. This is one of the things we try to accomplish at the Center for the Study of Higher Education — the placement of specific aspects of the here and now in their larger historical and philosophical context. For students in the Center the basis for this is more than a few minutes of painting with the broad brush; we try to provide a firm grounding in the form of solid course work in the history and philosophy of higher education.

We also try to do something else at the Center. We try to fill in the larger picture with the details of the *what* and *why* that will enable our students to deal constructively and realistically with the specific pieces of the higher education scene with which they will be working. Without losing sight of the total picture, we try to prepare people for administrative positions in institutions of many types. Among the many aspects of higher education with which we try to deal, some of our students specialize in community junior college work, and some specialize in the functional activity of institutional research and planning.

Institutional Research

Institutional research is a relatively new addition to the family of administrative positions. The term institutional research is misleading because of the easy confusion between it and on-going programs of academic reasarch within institutions, but we seem stuck with it. A better term for it would be management research or analytical studies, either of which much better denotes the thrust of the enterprise — the improvement of the operation of individual institutions or cooperating groups of institutions through careful study and analysis of their organization, and their operational processes and outcomes. These include not only those associated with such clearly administrative activities as budgeting and space utilization, but also those that get closer to the heart of the operation such as studies of admissions, teaching, and inter-institutional articulation.

I fear that most of us who have some familiarity with institutional research still fail to grasp the full breadth of the field because of the fact that most institutional research offices tend to concentrate upon one or another specific group of institutional research activities. This is due in part to the particular interests and capabilities of the institutional research staff in various institutions, and in part to the particular needs of individual institutions at a particular time. The specific needs and interests which cause the establishment of an institutional research office in the first place often acts to determine

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the type of staff employed and the focus of attention for far longer than needs to be the case.

Indeed, there often develops within the institution the assumption that the special interests of that institution's institutional research office is the proper sphere of interest of institutional research in general. As a result I have seen situations in which institutional research offices which originally concerned themselves with space utilization studies and financial analysis were told, or told themselves, that it would be inappropriate and improper for an institutional research office to concern itself with such things as studies of student admissions, student chracteristics, student performance, teaching techniques, and faculty characteristics; and by the same token I have seen institutional research offices which started out by making studies of student related activities that subsequently refrained from entering into "inappropriate" activities such as studies of space and costs.

It is interesting to see some of these people assemble in the annual meetings of their national organization, the Association for Institutional Research. The initial shock some of them experience at the variety of their brethrens' interests is instructive. Few people leave such a meeting without developing a broader concept of what the term institutional research can encompass.

A Recent Phenomenon

I emphasize this point because I know that many of your institutions have relatively recently entered into institutional research. The self-conscious designation of institutional self-study as a continuing process requiring the full-time energies of one or more specialized staff people is a recent phenomenon. With the exception of only a few institutions, it is a post World War II phenomenon, and for the majority of institutions it is a development of the last five or 10 years. The term institutional research has been in general usage for less than 10 years, the convening of annual national conferences on institutional research is an occurence of less than 10 years duration, and the national organization of institutional research officers is only two years old. The establishment of institutional research offices in junior colleges was rare a few years ago, but they are becoming more and more common.

Because institutional research personnel come from such a variety of backgrounds, and because the offices themselves have been established for such a variety of reasons, I think there is a tendency for most of us to miss the central significance of institutional research — the fact that its distinguishing characteristic is the systematic application of analytical techniques to issues and problems associated with the organization and operation of a college or university. Colleges and universities have accepted the basic concept that it makes sense to apply to their own operations the same type of rational processes which they have helped bring to bear upon other social organizations such as business and government. The acceptance of this concept means that college and university administration has moved out of the area of intuitive, and into the area of the rational. It does not mean that there is no artistry left in the administrative process; it does mean that the administrative artist is provided with the best analytical tools, and his artistry is exemplified not by how well he can guess at the facts, but how well he can utilize the facts, interpreting them, inter-relating them, orchestrating them, to produce the most harmonious possible ensemble.

Facilitating Student Flow

This meeting is concerned with certain interinstitutional aspects of our utilization of our knowledge about students. Of central concern is facilitating the flow of students from community junior colleges to senior institutions. The first prerequisite to this process is the acquisition of basic information about students and about programs by each of the institutions individually. This information is not gathered by them only for the purpose of inter-institutional cooperation, since is is needed even more for a variety of intra-institutional purposes, but it nevertheless is essential to inter-institutional cooperation. Without it, there is no common vocabulary, no certain set of facts with which to begin.

Not too many years ago the elements of information involved were fairly few and fairly simple — a few student test scores and some basic information about course offerings within the institution and student achievement in those courses. Today the information potentially useful is far more complex. The new ETS college level tests will add a major new dimension to our measurement of student achievement. The proper utilization of these tests will require an adequate consideration of some institutional issues which go beyond the test results themselves. Are they to be used as a supplement to other achievement measures, or as a substitute for them? If they are utilized in the determination of eligibility for transfer between institutions, what does this imply for a university's obligation to utilize them in determining the retention or non-retention of native students to be enrolled there in the first place?

Student Admission

Initial admission to most colleges and universities has been based primarily upon records of actual achievement, of potential for achievement or some combination of the two. So has transfer between institutions. I think there is general agreement in higher education that for most institutions these are proper bases for admissions decisions. Exceptions are those institutions that receive more applications from high achievers than they handle, and "opportunity" type admissions, which constitute a form of compensatory opportunity which is afforded in an effort to help overcome the effects of unusual deprivation.

Stated somewhat more globally, admissions decisions, whether concerning initial admission or transfer admission, should relate the probability that the student will benefit from the program of the institution to which he is transferring; for most institutions the most impartial measure of this can be stated in terms of student achievement — past or potential. How tightly this is defined varies markedly among institutions; this is one of the desirable aspects of the diversity which characterizes American higher education.

Admissions, however, involves more than the question of whether a student is eligible for admission. It also involves, or should involve, the question of whether a student should be advised to enter a particular institution. Stated another way, which institutions should a particular student be counselled toward, and which institutions should he be counselled away from. The virtual deluge of information which has begun to appear about student characteristics and about institutional characteristics that affect student performance and student satisfaction has opened a whole new set of questions which counselors and institutional administrators in general will be wrestling with for a long time.

The work of such men as Ted Newcomb and Jerry Gurin, of The University of Michigan, has contributed greatly to our understanding of students, student behavior, and the variation in campus environments, and climate, as has the work of researchers elsewhere like Robert Pace, George Stern, Martin Trow, Burton Clark, Nevitt Sanford, Dorothy Knoell, Leland Medsker, and others.

One piece of information of particular significance to this conference is the accumulating evidence that students who do well at complex multiversity campuses are students who have personality characteristics which prepare them to live successfully in the relatively impersonal setting of the city-big campus. For example, Ann Arbor is not a big city, but in many respects The University of Michigan and Michigan State University in East Lansing have the social and psychological impact of the city. The student who transfers from a small campus to these universities experiences many of the same shocks experienced by the small town resident who moves to the larger city.

Our cities are populated by people who have moved from the small towns, so there is no question about the ability which large numbers of people have to successfully make the transition. We also know, however, that many people do not make the transition successfully, and we are learning more and more about the social and personal characteristics associated with success and non-success.

Questions to Consider

What is the responsibility of the counselor to familiarize himself with these characteristics, to look for them in the students he counsels, and to be guided accordingly? This point can be pressed still further. America rapidly is becoming an almost totally urban society and, in keeping with the times, most of our senior colleges and universities are becoming larger and much more complex. What is the obligation of the community junior college to examine its own program with the question in mind: What are we doing to prepare our students for life in a world which inevitably will be big almost to the point of being overwhelming? And what is the responsibility of the university to assist students in the transition to that kind of world, both in its on-campus and its off-campus or post-university aspects? The University of Michigan's "Residential College" is one such attempt, but it obviously is only one piece in a very large puzzle.

I think that these questions concerning the student adjustment to bigness — bigness in our colleges and universities and bigness in the world outside our colleges and universities — and adjustments to the world tomorrow will be and should be matters of major concern to both community colleges and universities for many years to come. In many respects these questions, and the institutional answers to them, are intimately associated with the necessary inter-relationships which must exist between community colleges and universities. They are, therefore, a proper concern for this conference in this and future years.

As I indicated earlier, we live in revolutionary times. America, as a nation, has found the answer to harnessing the power of its multiple revolutions to satisfy the rising expectations of its people. One of the key factors in this process has been the cooperative interaction between such revolutionary forces and the multiversity and the community junior college, both of which are represented here today.

Institutional Research and the Junior College: Some Information and a Point of View

J. Robert Cleary
Educational Testing Service (ETS)

I would like to do two things: first, to discuss some relatively new instruments, now in various stages of development or refinement, and to describe activities for community or junior colleges in which our organization is engaged either independently or as a partner; and, second to suggest some elements of institutional research which, I consider important to you.

Before continuing I should like to offer two disclaimers. First, we don't have a "program" for institutional research or evaluation, if by a program is meant an infelxible, rigid package of tests and services. Such is antithetical to the research process and to what is known about the diversity of needs in your institutions. Seriously, I claim no particular expertise concerning junior or community college institutional research. In fact, most of us who are or have been involved with institutional research or who otherwise bring to this problem area backgrounds in measurement and psychology are quite unfamiliar with the "problems of the junior or community college"—and we are taking whatever steps we can to become more conversant with such problems. Having made these disclaimers, I shall proceed to the tasks at hand.

Presently, at the Educational Testing Service, we have two fairly-well developed instruments in use, both may be interesting to you. ETS did not develop either of these but served as the agency through which data were assembled, revisions were made, and studies using these instruments were conducted. The first instrument, with which many of you are familiar, is The College and University Enviromental Scales, known as CUES, and developed by Dr. Robert Pace. The second is The College Student Questionnaires which resulted from the work of Dr. Martin Trow. Both are group instruments—that is, the main purpose of each is to collect data on groups as groups. Their objective is not to obtain information about individuals, though the individual is the medium through which the group information is obtained.

The present CUES began several years ago as a result of the joint efforts of Drs. Robert Pace and George Stern, then both of Syracuse University. Their efforts yielded a 300-item instrument, known as the College Characteristics Index (CCI), based on a personality configuration of 30 variables developed by Murry and predicated upon his concept of "environmental press." Stern's interests in the instrument was focused upon the individual and his personality, while Pace's interests were directed toward educational practice and the description of educational environments. Some five years ago, Pace left Syracuse for UCLA. There he used the data gathered with the 300 items of the CCI, chose the 150 items which best discriminated or highlighted the difference between institutions,

and assembled the 150 items into sets of 30, yielding five scales and the instrument known as CUES.

The five dimensions or scales of CUES are: (1) *Practicality:* the degree to which personal status and practical benefit are emphasized in the college environment. Status is gained by knowing the right people, being in the right group, and doing what is expected; (2) *Community:* the degree to which the campus is friendly, cohesive, and group oriented; (3) *Awareness:* the degree to which there is concern with self-understanding, reflectiveness, and the search for personal meaning; (4) *Propriety:* the degree to which politeness, protocol, and consideration are emphasized, and (5) *Scholarship:* the degree to which serious interest in scholarship and competition for academic achievement are present. The purpose of this instrument is to describe the "institutional press" or the environment of the institution by means of these five scales.

In general, use of the instrument during the past few years has served two broad purposes: (1) to provide additional information about undergraduate institutions to improve the guidance of secondary school students, and (2) to provide data for institutional planning by administration and staff of undergraduate colleges and universities, including in some cases attempts to manipulate certain physical, social, and program features of the institution amenable to manipulation and change.

The description of the educational climate provided in the catalog issue of the Antioch College *Bulletin* and the environment information on some colleges found in the *Manual of Freshmen Class Profiles of Indiana Colleges* are examples of attempts to use CUES as additional guidance information. More rare are examples of attempts to study and then to change the environmental press of an undergraduate institition. However, a personal experience might be apropos to this discussion.

Five years ago, while serving as director of institutional research at St. Louis' Webster College, we became distressed, after validating student responses to CUES, by our position on the CUES scales. We considered the description valid but inconsistent with certain institutional goals which were then undergoing rapid change. One such scale position with which we were unhappy was our high position on the propriety scale—not that we were against high propriety—but we were against how we got the high position. We found certain critical and regulatory "press" oppressing to our students, a group which was then more liberal than those who had attended the institution in the past. We decided that this "press" was inconsistent with certain goals of the college, and we set out to change things. Tight control appeared to us inconsistent with our desire to have Webster College women see themselves as adults capable of addressing important social, political, and theological issues of the day. For literally a pound of rules, regulations, instructions, etc., sent through the mail to the high school seniors we had accepted for admission, we substituted a letter of welcome and a statement to the effect that they would be treated as young adult women until and unless we found behavior expressed to the contrary. For nuns and other types of hall monitors, we substituted the check of individual responsibility. Instead of lights-out regulations, an elaborate system of control of permissions to leave campus, and certain smoking restrictions, we again relied on the individual's sense of responsibility. There was a noticeable change.

The second instrument I wish to mention is The College Student Questionnaires (CSQ). These questionnaires have been designed to obtain descriptions of students primarily in terms of biographical and attitudinal characteristics. The questionnaires also include questions concerning student's actitivies, perceptions, and staisfactions as students at a particular college. The instrument consists of two separate questionnaires—Part I and Part II. Part I is administered to entering students; Part II is administered to undergraduates at the end of each academic year. Each questionnaire contains 200 multiple-choice questions and requires approximately 60 minutes for completion. Together the two parts of the CSQ contain 13 scales consisting of 10 items each. Five of the scales are common to the last section of both questionnaires. The scales are named Motivation for Grades, Family Social Status, Family Independence, Peer Independence, Liberalism, Social Conscience, Cultural Sophistication, Satisfaction with Faculty, Satisfaction with Administration, Satisfaction with Major, Satisfaction with Students, Study Habits, and Extracurricular Involvement. Again it should be noted that the questionnaires are appropriate only for suggesting possible differences among groups, not individuals.

Both of these instruments, along with other achievement measures, are available through a flexible plan of instruments, services, and consulting, (if desired), called the Institutional Research Program for Higher Education (IRPHE).[1]

With regard to the measurement of personality, an area of concern and interest to you, I am less optimistic that available instruments from any source will have practical application for you in the near future. Research staff at ETS have been involved with personality research for the past 10 years or more. Thus far we have available for research purposes only the Myers-Briggs Type Indicator from our Office of Special Tests.[2] The measurement of personality still has a number of sticky constructural, procedural, and technical problems which will probably remain with us for a long time to come.

Now I would like to turn to a brief description of some ETS activities in behalf of junior colleges. As a part of this description I shall mention some newer instruments which are in various stages of development. During the past year, the American Association of Junior Colleges and ETS have conducted several meetings to discuss cooperative efforts and joint projects in an attempt to meet some of the problems of measurement of junior college populations. Recently these two groups have issued a charge or a mandate which created an advisory committee to ETS as joint efforts are planned.

The first broad effort will direct attention to specific instruments and/or programs in the vocational-occupational area. The advisory committee will (1) define the broad concerns of the project and consider appropriate dimensions for implementing objectives; (2) provide a medium for developing plans for continuing review and discussion for the measurement program; and, (3) assist in establishing adequate communications with the junior college community.

Thus far I can report four tasks which have been initiated: (1) the undertaking of a descriptive survey of the junior college population; (2) the developing of a program and the materials for improving the training of junior college student personnel workers; (3) the developing of measures

[1]Further information about IRPHE or IRPHE instruments can be obtained by contacting Dr. Eldon C. Park, IRPHE Program Director, Educational Testing Service, Princeton, New Jersey 08540.

[2]Those interested in details of this instrument may contact Mr. Francis X. Nulty, Director of the Offic of Special Tests, Educational Testing Service, Princeton, New Jersey 08540.

to describe the outcomes of occupational programs; and, (4) the developing of techniques to measure the special characteristics, interests, and aptitudes relevant to an individual's entry into occupational programs.[3]

In addition to AAJC-ETS activity, the College Board has begun dialogue with the junior college community and has also initiated an interesting project. The interest of the College Board in junior and community colleges, of course, stems naturally from the Board's interest in its own membership as well as the implications of the junior college as a means of access to higher education. In that sense the Board is concerned not only with the transfer problem, but with the transition from school to college, an interest and a concern which is a logical outgrowth of its charter.

Last fall nearly 50 junior college and community colleges in all regions of the country were visited and surveyed by College Board and ETS personnel to obtain assistance in reacting to an experimental program of study that the College Board had planned. As a result of this detailed survey the College Board will begin an experimental program of tests and services in perhaps 50 institutions in the next academic year to study how effective certain new instruments are and how suitable and valid they may be for institutions primarily concerned with the first two years of higher education. At present this experimental study and the battery of instruments to be studied has been given the name of The Comparative Placement and Prediction Battery. Basically this study has its instruments organized into three components. The first component is a core program or a core set of instruments measuring academic ability, reading, and mathematics fundamentals for placement purposes, with the possible addition of a non-verbal ability measure which could be associated with occupational areas. Each of these instruments will, of course, be shorter than the Board's SAT or the American College Testing Program's ACT. Therefore, each will be less reliable in a statistical sense, but the problem will be to provide adequate reliability while giving more specific information than either of the widely used general purpose instruments. These instruments, then, will address themselves directly to providing placement information.

The second component of this project will contain interesting new instruments, like background and experience questionnaires, independent activity questionnaires or inventories, and, although they are related in rationale to CSQ, the set will also include certain kinds of special instruments, such as tests of cognitive style, in hopes that some of these will be found useful for some of your problems. The third group or component of the study instruments will be those referred to as research instruments. These include an environmental measure, special factor tests of the kind related to what we refer to at ETS as the factor kit. a set of instruments developed in collaboration with outstanding psychologists outside of ETS over the past 15 years or so. It may very well be that one or more of these research instruments will provide real payoff in assisting you with institutional research problems in the future. A year from now we shall be in a better position to say.

In addition to these activities ETS is presently cooperating with individual junior college institutions as well as one to two states in working cooperatively to improve the measurement of junior college students in these institutions.[4] The activities just mentioned will give you a feeling for the extent of our involvement in matters relating to the needs and interests of junior and community colleges.

Let me touch further on the idea of "payoff" for you. Implicit in the comments which follow, and supporting a point made in one of the morning presentations, is the assumption that the heart of the entire educational enterprise is the instructional program. Every other institutional aspect, facility, or source of energy in the last analysis exists to support the educational program offered. Therefore, much of the focus of institutional research should be directed toward improving the educational program.

A first notion logically follows this assumption. In planning improvement you first have to know what you are, or what you do, before you can decide what you wish to do, or where you wish to go. That is, you must assess the present in order to plan the future well. So as increasing numbers of institutions in higher education set about the tasks of gathering data for policy decisions affecting the future of the institution, they find the first effort in institutional research is descriptive in character.

What kind of program, by whom is it offered, how is it offered, with what is it offered, and to whom is it offered are fairly broad questions which are generally raised. Some of the research data reported this morning by Dr. Johnson were the result of focusing Michigan State energy on some of these questions.

With even tentative answers to these questions, and the data which provide the answers in hand, some judgment or evaluation (assigning value to the relative importance of information) will result. These evaluations, the values assigned, will result in certain satisfactions and dissatisfactions. Both generate ideas for improvement, and suggest more specific questions to pursue.

Although these activities just mentioned are necessary, in my opinion they are also loaded with traps. It is fair to say that much of what might be termed institutional research has little practical payoff either because it is actuarial or demographic in nature or because it is done without regard to the broader institutional context. Let me illustrate an example of each type to clarify this statement.

Every year many studies appear which document credits earned, hours by subject, faculty salaries, etc., and every year validity studies appear which describe the relationship between test scores and GPA's. I believe that these studies are necessary at times but not sufficient for any direct improvement in the instructional program. The best we can hope for in a validity study procedure are validities in the sixties, which, I would remind you, indicate that the test score or scores in combination account for well below half of the variance in grades. Usually predictors account for a great deal less than that. Demographic and "continuing resources" type of institutional study are not bad in themselves either, but to be useful they must be related to some demonstrated effort on the program and particularly on a student in the program. This last comment also applies to a final example.

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[3]Related but distinct from AAJC-ETS efforts is the work of Dr. Dean Seibel, an ETS staff member, who surveyed systemically junior college problems and needs. A report of his work is available through the Evaluation and Advisory Service, Educational Testing Service, Princeton, New Jersey 08540.

[4]Dr. George M. Barton is the ETS staff member who is the Program Director for independent ETS activities with junior colleges. Dr. Barton is in the Princeton Office.

Institutional research involving studies content, facilities, staff utilization, various media of instruction, and other facilitating energy, while often methodically and technically sound, remains valueless because the purpose or objectives for the activity remain obscure, if in fact they were ever known. If the objectives for such an activity are unclear or obscure, it is impossible to call up criteria which can be used to assign value to the study. In technical jargon we call this the "criterion problem." My own view, then, is that there is one critical problem area which transcends in importance all others, and without attention will severly limit the effectiveness of any institutional research effort. This is the matter of educational objectives.

As long as educational objectives remain vague and couched in philosophical terms, or in terms of lists of content to be covered, or in terms of what teachers do rather than in terms of what students do, we will never realize the promise of institutional research. In technical jargon we refer to this task as "expressing educational objectives in behavioral (operational) terms." In expressing them in such a form there is only one referent—the student.

I do not have time to develop this idea of behavorial objectives further except to underline its importance and in all fairness to say that it is a most difficult task indeed. A useful beginning with your staffs would be to expose them to the best first step I have found. And that is, a small but important book by Robert Mager entitled *Preparing Instructional Objectives.*[5]

Once the matter of objectives is addressed and some success in expressing objectives in that form has been realized, for me three things happen.

First, operational terms now exist as objectives which can serve also as criteria for studies of special kinds. Questions concerning which academic calendar we should have, whether we should have a large group instruction or not, the worth of a new math sequence, or a new course, etc., (the facilitating questions) can be answered with some confidence, if in the beginning we know more clearly the kind of student behavior or performance desired.

Second, the placement problem takes on a new look for me, when I know from the past record of a student what important things he can do in basic mathematics and the requirements of next courses in a mathematics sequence—as well as when the emphasis is placed on the fit between the two. Unfortunately student grade information is of little help, nor are total test scores. The problem with both of these kinds of information is that they fail to communicate what the student can do.

The placement problem is related to the general criterion problem mentioned before in connection with the limitations I saw in validity studies. GPA's are in a sense more reliable as an over-all estimate of pupil quality than one course grade. Both the GPA and the grade, however, are inaccurate as criteria for the same reason that grades and total test scores are inadequate as placement information. They disguise more than they disclose. What must be disclosed is what students can now do.

Certainly we have gotten tests about as reliable as we can get them. Although they are still fairly gross measures and are likely to remain so, we can look only to the criterion end of the prediction problem to increase the accuracy of our predictions. Expectancy tables (the statistical approach) have been with us for a long time. What we need is a sharper criterion—a fresh look at the problem—a common currency with which to communicate pupil performance.

I would hope that you could encourage staffs to begin the development of such a communications system and not to fall into the trap of researching everything in the same old way as we have done before.

There are instruments around with junior college names on them now and are likely to be more—that fact could also be a trap. Tests deserve content analyses with emphasis on what the student does as he answers the items to see if the requirements of the test relate to the operational goals established by the institution.

For a number of problems, then, we need a common language of pupil behavior. Even the transfer problem takes on a different complexion when, in addition to a rank in class or a grade point, we can communicate five or 10 critical skills which the student can now do as a result of having had English 201. At the present time we know only his grade in English 201, not what he can do, even after having read the catalog description. In some way, it is impossible to measure or communicate what we can't see. It is also difficult to plan without clear objectives. In my opinion, a first task is to specify educational objectives in operational terms.

[5]Mager, Robert F. *Preparing Instructional Objectives.* Fearon Publishers, Inc., Palo Alto, California.

Charles Alexander, editor

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